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Proposed Amendment

APPENDIX

1.

(Currently Amended)

A storage control apparatus for accessing data ~~of~~stored in a logical unit, ~~which is~~concatenation unit having a plurality of logical units, each logical unit being comprised of a ~~single~~one or a ~~plurality of~~more physical units, by a request from a host, comprising:

a channel adapter for interfacing with said host; and

a plurality of controllers which control each one of the plurality of logical units,

wherein when said channel adapter receives an ~~I/O~~said request ~~to a concatenation logical unit concatenating a plurality of said logical units~~ from said host, said channel adapter sends an I/O data request for one logical unit of said plurality of logical units to ~~one~~a first controller which causes said one logical unit ~~constituting said concatenation logical unit, out of said plurality of controllers,~~ to execute the I/O processing in said ~~one~~first controller, and then said channel adapter sends another I/O data request for another logical unit of said plurality of logical units to ~~another~~a second controller which causes said another logical unit ~~constituting said concatenation logical unit, out of said plurality of controllers,~~ to execute the I/O processing in said ~~other controller.~~second controller, and

wherein said first controller judges whether said I/O data request is an I/O request extending over to said second controller which is in charge of said another logical

unit after said I/O processing in said first controller, and sends a message indicative of the judgment result to said channel adapter.

2. (Cancelled)

3. (Currently Amended) The storage control apparatus according to Claim 2,1, wherein ~~said~~ each controller has a table for storing the logical block address range of each logical unit, and

said first controller refers to said table in the logical block address range requested by said I/O data request, and judges whether said I/O data request is an I/O data request extending over to said ~~another~~second controller, which is in charge of said another logical ~~unit constituting said concatenation logical unit.~~

4. (Currently Amended) The storage control apparatus according to Claim 2,1, wherein said channel adapter sends said I/O data request to said ~~another~~second controller according to the response from said ~~one~~first controller that the I/O data request extends to said ~~another~~second controller.

(5.) (Currently Amended) ~~The storage control apparatus according to Claim 1,~~ A storage control apparatus for accessing data stored in a concatenation unit

having a plurality of logical units, each logical unit being comprised of one or more physical units, by a request from a host, comprising:

a channel adapter for interfacing with said host; and

a plurality of controllers which control each one of the plurality of logical units,

wherein when said channel adapter receives said request from said host, said channel adapter sends an I/O data request for one logical unit of said plurality of logical units to a first controller which causes said one logical unit to execute I/O processing in said first controller, and then said channel adapter sends another I/O data request for another logical unit of said plurality of logical units to a second controller which causes said another logical unit to execute I/O processing in said second controller,

wherein said channel adapter has a table for storing said controllers corresponding to each logical unit, the logical block address range of each logical unit, and the logical units constituting said concatenation logical unit, and

said channel adapter selects a controller of said corresponding logical unit when an ~~I/O~~said request is received from said host.

6. (Currently Amended) The storage control apparatus according to Claim 5, wherein ~~said each~~ controller has a table for storing the logical block address range of each logical unit, and

said first controller refers to said table in the logical block address range requested by said I/O data request, and judges whether said I/O data request is an I/O data request extending over to said ~~another~~second controller, which is in charge of said another logical unit ~~constituting said concatenation~~ logical unit.

7. (Currently Amended) The storage control apparatus according to Claim 1, wherein said each controller comprises:

a cache memory for storing a part of the data of said logical unit which the controller is in charge of; and

a processing unit for executing I/O processing using said cache memory according to said I/O data request.

8. (Original) The storage control apparatus according to Claim 1, wherein said channel adapter is constituted by a plurality of channel adapters for connecting said plurality of controllers.

9. (Currently Amended) A storage control method for accessing data ~~of~~stored in a logical concatenation unit, which is each logical unit being comprised of ~~a single one or a plurality of more~~ physical units, by a request from a host, comprising steps of:

receiving an ~~I/O~~said request from said host to ~~a concatenation logical unit~~
~~concatenating a plurality of logical units by a channel adapter;~~

sending an I/O data request for one logical unit of said plurality of logical
units from said channel adapter to ~~one~~a first controller which is in charge of said one
logical unit ~~constituting said concatenation logical unit out of a plurality of controllers~~
which ~~is~~are in charge of said plurality of logical units;

executing I/O processing in said ~~one~~first controller;

judging whether said I/O data request is an I/O data request extending over
to said second controller which is in charge of said another logical unit after said I/O
processing by said first controller;

sending a message indicative of the judgment result to said channel
adapter.

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sending ~~another~~a ~~the~~ I/O data request for another logical unit of said
plurality of logical units from said channel adapter to ~~another~~a second controller which is
in charge of said another logical unit ~~constituting said concatenation logical unit out of~~
~~a of said~~ plurality of controllers which ~~is~~are in charge of said plurality of logical units; and

executing ~~the I/O processing in said other controller~~second controller.

10. (Cancelled)

11. (Currently Amended) The storage control method according to Claim ~~10,9~~, wherein said response step comprises:

a step of referring to a table storing the logical block address range of each logical unit in the logical block address range requested by said I/O data request by said ~~one~~first controller; and

a step of judging whether said I/O data request is an I/O data request extending over to said ~~another~~second controller, which is in charge of said another logical unit ~~constituting said concatenation logical unit.~~

12. (Currently Amended) The storage control method according to Claim ~~10,9~~, wherein the step of executing I/O processing in said ~~another~~second controller further comprises a step of sending said I/O data request to said ~~another~~second controller according to the response from said ~~one~~first controller that the I/O data request extends to said ~~other~~second controller by said channel adapter.

(13) (Currently Amended) ~~The storage control method according to Claim 9,~~ A storage control method for accessing data stored in a concatenation unit, each logical unit being comprised of one or more physical units, by a request from a host, comprising steps of:

receiving said request from said host to a channel adapter;

sending an I/O data request for one logical unit of said plurality of logical units from said channel adapter to a first controller which is in charge of said one logical unit out of a plurality of controllers which are in charge of said plurality of logical units;

executing I/O processing in said first controller;

sending another I/O data request for another logical unit of said plurality of logical units from said channel adapter to a second controller which is in charge of said another logical unit of said plurality of controllers which are in charge of said plurality of logical units; and

executing I/O processing in said second controller,

wherein said reception step comprises:

a step of referring to a table for storing said controllers corresponding to each logical unit, logical block address range of each logical unit, and logical units constituting said concatenation logical-unit by said channel adapter; and

a step of selecting a controller of said corresponding logical unit when an I/O request is received from said host.

14. (Currently Amended) The storage control method according to Claim 13, wherein said response step comprises:

a step of referring to a table storing the logical block address range of each logical unit in the logical block address range requested by said I/O data request by said one first controller; and

a step of judging whether said I/O data request is an I/O data request extending over to another said second controller, which is in charge of another logical unit ~~constituting said concatenation logical unit.~~

15. (Currently Amended) The storage control method according to Claim 9, wherein the I/O processing step for said I/O data request further comprises a step of executing I/O processing using a cache memory for storing a part of the data of said logical unit which each controller controls according to said I/O data request.

16. (Original) The storage control method according to Claim 9, wherein said channel adapter is constituted by a plurality of channel adapters for connecting said plurality of controllers, and said reception step further comprises a step of which one of the plurality of channel adapters for connecting said plurality of controllers receives the I/O-request from said host.